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IN

AGRICULTURAL ENGINEERING

UNITED STATES DEPARTMENT OF AGRICULTURE
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Vol. 1, No. 11

WASHINGTON, D. C.

May, 1932

Agriculture.

- Agriculture will not turn backwards. By E. T. Leavitt. Farm Implement News. v.53, no.19. May 12, 1932. p.12-13.
Best possible use of mechanical power required for economical production.
- Back to land movement: Editorial. California Cultivator. v.78, no. 19. May 7, 1932. p.430. Real strength of committee on land utilization movement lies in seeking to help owners of marginal lands put them to such use as will more or less permanently remove them from field of farm crop production
- Basic issues in Wisconsin agriculture. By K. L. Hatch. 1932. 36p. Wisconsin College of Agriculture. Extension Service. Circular no.251. Land Utilization, p. 13-16.
- Calls halt on back-to-land movement. Farm Implement News. v.53, no.19. May 12, 1932. p.14. Principal opportunity in country for unemployed lies in providing some of unemployed with opportunity to wrest subsistence from soil in areas suitable for gardening adjacent to large cities.
- Case against large scale farming. By Ronald A. Davidson. New Agricultural Review, v.1, no.6. February, 1932. p.26.
- Curse of overproduction. By Arthur M. Hyde. New Agricultural Review. v.1, no.3. November, 1931. p.9-10. States and Federal Government need to formulate effective program for future use of area.
- Drift from the farms has stopped: From report of Secretary of Agriculture. New Agricultural Review. v.1, no.6. February, 1932. p.10.
- Farming is no longer a mere way of life. By R. M. Turner. Washington Farmer. v.66, no.20. May 19, 1932. p.3. Land utilization; Development of machinery.
- Meeting agriculture's old and new problems with the aid of science. Annual report, 1930-1931. 152p. Wisconsin. Agricultural Experiment Station Bulletin no.421. Soil studies, p.28-41.
- Mr. Hyde on Agriculture Department's expenditures. Jersey Bulletin. v.51, no.19. May 11, 1932. p.662.

Air conditioning.

Air conditioning. By William Hull Stangle and Realto E. Cherne.
Pt. 19 - Fabrication and erection of ductwork. Heating and
Ventilating. v.39, no.5. May, 1932. p.44-50.

Air conditioning is the outstanding innovation in the home moderne.
By A. W. Wrieden. American Builder and Building Age. v.52,
no.5. February, 1932. p.46-47. Ninety-eight per cent
of dust and other impurities are removed from air by modern air
conditioning systems.

Best temperature for light work. By E. V. Hill. Aerologist.
v. 8, no.5. May, 1932. p.5-12. Variance of working
capacities under different air conditions. First published
report of Holland Air Conditioning Research Program.

Dehumidifying air with calcium chloride. By S. B. Heath. Heating
and Ventilating. v.39, no.5. May, 1932. p.40-43.

Meaning of air conditioning. By W. D. Jordan. Fuel Oil
Journal. v.10, no.12. June, 1932. p.22-24, 92-95.

Some aspects of domestic air conditioning. By W. M. Timmerman.
Electrical World. v.99, no.20. May 14, 1932. p.854-856.

Associations.

A. S. A. E. annual meeting program: Ohio State University, Columbus,
Ohio - June 20, 21, 22 and 23, 1932. Agricultural Engineering.
v. 13, no.5. May, 1932. p.137-138.

Building construction.

Pitfalls in wood framing. By Harold S. Woodward. American
Architect. v.141, no. 2605. March, 1932. p.44-45, 66-68.

Columbia Basin.

War Department Engineer reports on Columbia River: Nine sites,
exclusive of Rock Island, could supply 8,000,000 kw. Total
development cost about \$740,000,000. Electrical World. v.99,
no.20, May 14, 1932. p.834-835.

Concrete.

Mixes and methods for lightweight concrete. General Building
Contractor. v.3, no.4. April, 1932. p.36-37.
Aerocrete.

Concrete improvements add value to your farm. By Ralph L. Patty.
Furrow. v.37, May - June, 1932. p.4, 11-12.

Concrete. (Cont'd)

Resistance of concrete to frost action. By F. H. Jackson and George Werner. Public Roads. v.13, no.2. April, 1932. p.32-38.

Weathering resistance of concrete. By E. J. Kilcawley. 1932. 49p. Rensselaer Polytechnic Institute. Engineering and Science series. Bulletin no.36.

Cotton.

Cotton investigations. By J.C. Overpeck and W. T. Conway. 1932. 13p. New Mexico. Agricultural Experiment Station. Bulletin no. 201.

Effect of machine method on stand of cotton. By Deane G. Carter and E. B. Whitaker. Agricultural Engineering. v.13, no.5. May, 1932. p. 119. Equipment used on various blocks included mechanical chopper, smoothing harrow, rotary hoe, check-row planter, and one-half row, one-row and two-row cultivators. Production with large machines and large power units has no adverse effect on stands of cotton.

Effects on cotton of irregular distribution of fertilizers. By A. L. Mehring and G. A. Cumings. Journal of Agricultural Research. v.44, no.7. April 1, 1932. p.559-570.

More acres better pay. By C. A. Cobb. Progressing Farmer. v.47, no.8. April 15-30, 1932. p.8. Tests conducted at Mississippi Agricultural Experiment Station to determine difference in making cotton crop with six different sources of power:- 1. One-horse implements. 2. Two-horse implements. 3. Four-horse implements. 4. Two-row tractors. 5. Three-row tractors. 6. Four-row tractors. Table gives average acre costs for three-year period.

Dams.

Constructing the Santiago Creek rolled-earth dam. By C.R. Browning. Engineering News-Record. v.108, no.19. May 12, 1932. p.682-684. Placing of 1,103,700 cubic yards of fill is accomplished in four months by concentration of motor equipment. Use of belt conveyor for transporting material presents difficulties. Reservoir provides 26,000 acre-feet of storage for joint irrigation use in southern California.

Laboratory tests on hydraulic models of the Hastings Dam. By Martin E. Nelson. 1932. 71p. University of Iowa. Studies in Engineering. Bulletin no.2.

Dams. (Cont'd)

Steel plated with welded joints seal rockfill dam. By H. I. Reid.
Engineering News-Record. v.108, no.21. May 26, 1932. p.761-763.
Initial use of welding in constructing steel face for rockfill dam proves successful in developing water supply for mountain-resort hotel colony in Colorado. Editorial, p.751.

What the Hoover Dam and Boulder Canyon project mean to Western Agriculture. By Cecil W. Creel. Extension Service Review. v.3, no.5. May, 1932. p.67-68.

Drainage.

Survey shows how drainage practices vary. By R. M. Starbuck.
Domestic Engineering. v.139, no.4. May 14, 1932. p.29-30.
House drainage.

Electricity on the farm.

All-electric hatchery. Rural Electrification and Electro-Farming. v.7, no.83. April, 1932. p.331-333.

Hot water for the farm. By Harry R. O'Brien. Electricity on the Farm. v.5, no.5. May 1932. p.14-17. New chore for rural power line. Many angles need to be investigated - kind of equipment needed for farm uses, type of rate that will be satisfactory to both power company and farmer consumer, and whether or not off-peak heating is most practicable.

How much current required? By W. C. Krueger. American Agriculturist. v.129, no.14. April 2, 1932. p.5. Gives amount of current consumed in various farm operations.

How stands rural electrification? Electrical World. v.99, no.22. May 28, 1932. p.961-965. Progress being made in reduction of physical costs, but real need is for education of farmers in uses of electricity and for provision of means for financing purchase of equipment.

Light as a factor in dairying. By Prof. Oscar Erf. Jersey Bulletin. v.51, no.17. April 27, 1932. p.583-584.

Methods of artificially lighting winter layers. By I. W. Rhys and Raymond T. Parkhurst. Rural Electrification and Electro-Farming. v.7, no.84. May, 1932. p.367-369. Report from National Institute of Poultry Husbandry.

Erosion Control.

Gully damage can be stopped: Proper measures will control soil-washing. By Ivan D. Wood. Nebraska Farmer. v.74, no.9. April 30, 1932. p. 3, 11.

Erosion Control. (Cont'd)

Preventing sand drifts on highways. Engineering News-Record. v.108, no.22. June 2, 1932. p.801-802. Methods of checking sand drift formation by fences, planting, spraying and blanketing, including examples from railway practice.

Robber that steals our soil: Erosion takes heavy toll from productive lands of the United States. New Agricultural Review. v.1, no.4. December, 1931. p.8-9.

Saving surface soil and preventing erosion. By L. R. Taft. 1932. p. 237-244. Michigan. Agricultural Experiment Station. Quarterly Bulletin. v. 14, no.4. May, 1932. Terracing orchard land; furrowing to prevent erosion; use of dams.

Soil erosion control in Illinois. By E. W. Lehmann. Agricultural Engineering. v.13, no.5. May, 1932. p. 126-127. Problem of soil erosion is problem of surface drainage, solution of which is dependent largely on conservation and control of flow of surface water. Destructiveness of surface drainage in eroding land is dependent on quantity and rate of run-off. This is more dependent on intensity and amount of rainfall that occurs during short period than on total amount of rain that falls during month or year. Run-off and erosion are also dependent on topography, soil, and cultural practices on land.

Stopping wash in ditches plant cottonwood, willow and black locust. Wallaces' Farmer. v.57, no.8. April 16, 1932. p.12.

Extension.

Report of extension work in agriculture and home economics in the United States, 1931. 1932. 136p. U. S. Department of Agriculture.

Farm Buildings.

Farm building losses in Iowa due to wind. By Marvin F. Schweers. Agricultural Engineering. v.13, no.5. May, 1932. p. 117-119. Conclusions:- 1. Plate joint, when improperly braced, results in large portion of building losses due to wind. 2. Under average methods of bracing plant joint, failure occurred at purlin. 3. Deflections were about same under smaller loads. It was not until some portion loosened that there is marked change in trend of curves. 4. There is no advantage of using long brace as compared to short brace at plate. 5. Nailing of rafter to side of stud resulted in by far greatest strength, and this method of construction seemed simpler.

Farm machinery and equipment.

- Artificial during of hay is practical. By L. J. Smith.
Washington Farmer. v.66, no.20. May 19, 1932. p.3.
More certain results and better control of quality possible from
use of mechanical driers. Hay drying is not confined to alfalfa,
any green feed can be dried in similar manner. Some believe that
this method will take in field of corn fodder.
- Case announces a pick-up baler. Implement and Tractor. Trade
Journal. v.47, no.12. June 4, 1932. p.18.
- Developing grain sorghums for combine harvesting. By John B.
Sieglingor. New Agricultural Review. v.1, no.9. May, 1932.
p. 6-8.
- Efficient machines cut cost of harvesting. By E. T. Leavitt.
Farm Implement News. v.53, no.20. May 26, 1932. p.14.
- Farm machinery prices: Few pertinent facts. 1932. J. I. Case
Company. Racine, Wisconsin.
- Farm progress follows use of modern machines. By E. T. Leavitt.
Furrow. v.37. May - June, 1932. p.5, 10.
- Ferdinand Woodward's reaper. By Carl R. Woodward. New Jersey
Agriculture. v.14, no.6. June, 1932. p.14-15.
"Push reaper". Cutting device consisted of tempered steel blades
of shear or scissors type. Of each pair of shears upper blade
was about 7 inches long and lower about $5\frac{1}{2}$ inches long. Lower
blades were stationary, upper ones pivoted near base and fastened
to connecting rod that worked back and forth horizontally from
gearing attached to right front wheel. Cutters could be raised
or lowered, and divider separated standing grain from that about
to be cut. Cut grain fell upon table and operator stood on plat-
form immediately behind to rake grain into sheaf box at left side.
When there was sufficient grain in box to make good-sized sheaf
it was dropped to ground by means of treadle operated by reaper's
foot.
- First four-wheel disk plow is self-sharpener. Popular Mechanics.
v. 57, no.4. April, 1932. p.615. Self-sharpening disks,
absolute control of four wheels in any movement, floating axles
which cause only frame to rise when disks strike some obstacle,
and fast power hoist are some features of plow.
- Fowler - Gyrotiller demonstration. Sugar News. v.13, no.2.
February, 1932. p.105-108.
- Good tools insure good hay. By E. T. Leavitt. Farm Machinery
and Equipment. No. 1781. May 15, 1932. p.5-6.

Farm machinery and equipment. (Cont'd)

Here is a new one. American Thresherman. v.35, no.3. March, 1932. p.14-16. Correlating functions of motor truck feed grinding outfit with those of grain threshing machine. Object to be accomplished by use of special type of threshing machine designed to rely on blower built into and constituting part of feed grinding outfit, for power in form of moving column of air.

Modern tools build profits. By L. G. Samsell. American Thresherman. v.35, no.3. March, 1932. p.4-5.

New implement makes weed treating easier. Washington Farmer. v.66, no.20. May 19, 1932. p.7. New device is mounted on subsoiling machine in such way that liquid in easily regulated amounts is deposited deeply in soil and automatically covered as soil settles into cuts.

New in farm machines. By E. R. Gross. New Jersey Agriculture. v.14, no.6. June, 1932. p. 8-9. Inventive genius with resulting improved machinery is still mover in progress of civilization. At such time as this, with low prices and high production, it is all more important that farmer should as far as possible reduce cost of production by greatest elimination of hand labor and fullest use of machinery. He should strive for highest yield at lowest labor cost.

Plow cuts furrow forty-two inches deep. Popular Mechanics. v.57, no.4. April, 1932. p.592. Cuts furrow forty-two inches deep and thirty-six inches wide. Three tractors pull plow, turning over an acre of ground every two hours.

Powerlift for wheatland disk. Implement and Tractor Trade Journal. v. 47, no.11. May 21, 1932. p.13. Minneapolis-Moline announces new adjustable model retaining old features and adding hydraulic absorption of shocks.

Shall we grind feed. By R. E. Nigrud. American Thresherman. v.35, no.2. February, 1932. p. 6-7, 17-18. Portable feed mill has many advantages over stationary type.

Smaller iron horses at work. Wisconsin Agriculturist and Farmer. v.59, no.9. April 30, 1932. p.3, 7. Many practical applications of small tractors to lighter jobs on general farms as well as in truck fields.

Thresher injury in baby lima beans. By H.A. Borthwick. Journal of Agricultural Research. v.44, no.6. March 15, 1932. p.503-510.

Twice the hay in the same mow. By J. Brownlee Davidson and Dr. C.Y. Cannon. Implement and Tractor Trade Journal. v.47, no.12. June 4, 1932. p.12, 16. Chopping practice, gaining in popularity, doubles storage capacity and offers advantages in feeding dairy stock.

Farm machinery and equipment. (Cont'd)

Universal hoe has many adjustments. Market Growers Journal.
v. 50, no. 10. May 15, 1932. p.249. It is single
implement but convertible by adjustment into blocker, weeder,
hiller or ditcher. Setting two blades at any angle is quickly
done as they work on ball and socket principle.

Washington--first in farming, too. By James Hay, Jr.
Missouri Ruralist. v. 73, no. 16. February 15, 1932.
p. 3, 13. Description of barrel plow.

Your plow and your seed bed: Poor work and hard work result when
adjustments are overlooked. W. H. McPheters. New England
Homestead. v.104, no.17. April 23, 1932. p.5, 8-9.

Fertilizer spreaders.

Improved placement of fertilizers in the hill of corn. By R. M.
Salter, C. O. Reed. E. E. Barnes, and C. L. Thrash.
Ohio Agricultural Experiment Station. Bimonthly bulletin no.156.
May - June, 1932. p. 83-98. Progress report of investigations
involving both controlled hand placement experiments and field per-
formance tests of commercial corn planter fertilizer attachments.

Methods of applying plant food. Wisconsin Agriculturist and
Farmer. v. 59, no.8. April 16, 1932. p.3. Equipment
for applying fertilizers; fertilizer grain drill; fertilizer
attachments.

Fertilizers.

Fertilizer materials and mixed fertilizers. By A. W. Blair.
1932. 40p. New Jersey Agricultural Experiment Station.
Bulletin no. 541.

Flood control.

Pennsylvania builds reservoir for flood-control and park use. Engin-
eering News-Record. v.108, no.19. May 12, 1932. p. 692.
Flood control for Shenango Valley, together with continual and ample
water supply for industrial uses and establishment of recreation lake
and park, are combined purposes of Pymatuning dam and reservoir, now
under construction in Pennsylvania by day labor as state enterprise
to relieve unemployment situation.

Reducing the flood menace by preventive action. By C. A. Bock.
Engineering News-Record. v.108, no.20. May 19, 1932. p.722-723.
Steps can be taken at little or no cost to check growth of hazards.
Publicity, administrative control and long-range planning are essen-
tial elements. Editorial. p. 715.

Fuels.

Can the burning of hog fuel be improved? By J. Gulick. Power. v.75, no.20. May 17, 1932. p.727-731. Comparison of existing methods.

Motor fuel from plants: Editorial. Montana Farmer. v.19, no.8. May 15, 1932. p.8. It has been discovered that ordinary motors will operate efficiently on fuel made of gasoline and alcohol mixed in proportions of three to one. Diesel engine can be operated with furfural as fuel and rapid progress which is being made in perfecting lighter type of Diesel engine indicates that this type of motor may soon be developed for general use in farm tractors.

Heating.

Basic laws and data of heat transmission. By W. J. King. Mechanical Engineering. v.54, no.6. June, 1932. p.410-414, 426. Forced convection.

Development of a direct contact water heater. By L. A. Scipio. 1931. 50 p. Purdue University. Engineering Experiment Station. Research series no.38.

Gas appliance adjustments when supplies are changed from manufactured to natural gas. By F. R. Wright. Domestic Engineering. v.139, no.2. April 16, 1932. p.69-71. Table gives correct gas rates for oven, broiler and top burner units. Discusses water heaters and central heating appliances.

Heating in residences and small structures. By H. L. Alt. Pt.X. Domestic Engineering. v.139, no.2. April 16, 1932. p.44-46.

Heating in residences and small structures. By H. L. Alt. Pt. XI. Domestic Engineering. v.139, no.3. April 30, 1932. p.48-42.

House heating not affected by direction of wind. Popular Mechanics. v.57, no.4. April, 1932. p.583. Although wind might reverse itself and blow from opposite direction, your house is no easier and no harder to heat, provided outside temperature remains same. This is conclusion reached by experimenters at University of Minnesota.

Oil burner research. By Wm. W. Stevens. Domestic Engineering. v.139, no.2. April 16, 1932. p. 66-68. Based on result of research work conducted at Yale University in cooperation with American Society of Heating and Ventilating Engineers and American Oil Burner Association.

Hotbeds.

Electric hot beds. Rural Electrification and Electro-Farming. v.7, no.83. April, 1932. p.337. Based on Report by National Rural Electric Project, College Park, Maryland.

Hotbeds. (Cont'd)

Soil heating. Rural Electrification and Electro-Farming. v.7. no. 83. April, 1932. p.352. Experiments conducted at Skobo, Sweden. Heated air drawn or forced through pipes, buried in soil, by low pressure steam. Pipes fit loosely, thus steam and air enter soil through joints. Electric heating better as less expensive to install and temperature of soil accurately maintained.

Houses.

Estimating and cost reducing methods of a one-man contracting business. By George A. Malmstedt. American Builder and Building Age. v.52, no.5. February, 1932. p. 44-45, 84.

Experiments with low-cost homes. By Peter A. Stone. General Building Contractor. v.3, no.4. April, 1932. p.18-25. Steel buildings, masonry houses, Dovell units.

Home building and ownership: Few highlights from President's Conference on Home Building and Home Ownership held in Washington, D. C., December 2 - 5, 1931. By Kenneth Kingsley Stowell. Architectural Forum v.56, no.1. Pt.2. January, 1932. p. 85-87.

Mass-production economies sought for small-house construction. Engineering News-Record. v.108, no.22. June 2, 1932. p. 800. Editorial, p. 782. Majority of speakers at meeting sponsored by American Institute of Steel Construction in New York favor shop fabrication and field assembly and report some efforts in this direction.

To get a dry cellar. By Edward F. Hammel. American Architect. v. 141, no. 2604. February, 1932. p. 40-41, 68.

Hydraulics.

Loss of head at branches determined for water pipes. Translated in abstract form by Eugene E. Halmos. Engineering News-Record. v.108, no.19. May 12, 1932. p.684. Experiments have been conducted at hydraulic laboratory of Technical University of Munich, Germany. Description of these experiments and analysis of data obtained are contained in paper by Emil Kinne, published in Vol.4 (1931) of Proceedings of hydraulic institute of Technical University, edited by Dr. D. Thoma.

Income, Farm.

Farmers' cash income and crop land. Farm Implement News. v.53, no.14. April 7, 1932. p.26-27.

Insulation.

Aluminum foil: Heat insulator for power plant equipment. Power.
v. 75, no.20. May 17, 1932. p. 717-718. When properly
installed, aluminum foil offers high resistance to heat transfer,
is light and unaffected by moisture.

Boards are made from moss to insulate houses. Popular Mechanics.
v. 57, no.4. April, 1932. p.633. Canadian moss boards
weigh 1.7 pounds per square foot, and are odorless. Heat as high
as 392 degrees Fahrenheit does not affect it. Surface readily stains
or may be painted. Material is known as "muskeg litter."

Economic thickness of thermal insulation. By John Burchard, 2nd.
Architectural Forum. v.56, no.1. Pt.2. January, 1932.
p. 90-96. Article gives formula which may be used for any locality
and under any given conditions. Practical check on economic use of
building insulation.

Standards proposed for wood fiber insulating board. Commercial
Standards Monthly. v.8, no.11. May, 1932. p.335.

Tests for insulation varnishes. By Dean Harvey. Electric Journal.
v. 29, no. 5. May, 1932. p.222-226. Varnishes have many
properties which should be investigated before they can be considered
suitable for electrical insulation. Tests of their characteristics
prior to application as well as performance in service are important.

Irrigation.

Fresno Irrigation District clear off bonded debt. Engineering News-
Record. v.108, no.21. May 26, 1932. p.777. Editorial,
p. 750. First district in California to accomplish complete repay-
ment of funded debt.

Importance of economic use of irrigation water. By R. L. Parshall.
Engineers' Bulletin. v. 16, no. 4. April, 1932. p.8.
Increased efficiency of our irrigation supplies through more accurate
and practical measurement of stream diversion and distribution, may be
accomplished at moderate cost and within reasonably short time.

Irrigation of agricultural lands. Summary for the United States, 1929
and 1930. 1932. 22p. U. S. Bureau of the Census.

Overhead irrigation for field crops. California Cultivator. v.78,
no. 19. May 7, 1932. p. 439. By applying water like rain
it is evenly distributed and no loss from run-off.

Parshall flumes measure water in Colorado irrigation canals. Engineers'
Bulletin. v. 16, no. 4. April, 1932. p. 11. Widths range
from one foot to forty feet and measure up to 1800 cubic feet per second.
Flume may be constructed of wood, metal, or reinforced concrete and con-
sists of restricted throat between two tapered sections.

Irrigation. (Cont'd)

Sub-irrigation. California Cultivator. v. 78, no. 16.
April 16, 1932. p. 370-371. Porous pipe or tile laid
in ground near surface of soil, through which water is run by
gravity in practically same manner as in surface furrow. Function
of tile being to maintain open channel or furrow beneath surface of
soil. Walls of tile being very porous, water freely percolates
through them into soil as rapidly as soil is able to take it up,
spreading gradually and uniformly in all directions. Tile being
laid about 18 inches below surface puts water very near root area.
Both ends of tile are carried above surface of soil and are left
open, permitting free and constant circulation of air through tile
between irrigations, greatly contributing to aeration of soil and
furnishing it with nitrogen. Advantages: 1. Water under absolute
control at all times. 2. No washing of top fertile soil. 3.
Renders unnecessary irrigation of top 3 to 5 inches of soil dis-
couraging growth of weeds. 4. Aids in mellowing soil above tile,
instead of baking it. 5. No waste by running into roads or upon
neighbor's property.

Land.

Better land utilization needed. By Nils A. Olsen. Agricultural
Review. v.22, no.3. September, 1931. p. 9-10.

Land utilization and surplus control. By M. L. Wilson. Montana
Farmer. v. 19, no. 17. May 1, 1932. p. 5, 17.
Essential steps in land use planning program: 1. New national land-
policy bill. 2. Classification of lands by each state. 3. Poor
land removed from farm production. 4. Modification of land taxes
and when necessary local rural government reorganized. 5. Balanc-
ing of production with market demands. 6. Part-time farming and
decentralization of industry.

Report of land utilization conference. New Agricultural Review.
v. 1, no.4. December, 1931. p. 11-14. Covers many phases
of agricultural problem.

Lubrication.

Sugar industry - Machinery operations and lubrication. Lubrication.
v. 18, no.5. May, 1932. p.49 - 60. Fig. 1.gives lubrication
diagram for Falkiner cane harvester.

Miscellaneous.

Annual report. New Jersey Agricultural Experiment Station. 1931.
386p.

Annual report of the director, Geodetic Survey of Canada. 1931. 31p.

Miscellaneous. (Cont'd)

- Architects to the Government: Bill just introduced to direct Secretary of Treasury to contract for architectural and engineering services in designing and planning of public buildings. Agricultural Forum. v. 56, no.1. Pt. 2. January, 1932. p.88.
- Balancing of economic forces. Mechanical Engineering. v.54, no.6. June, 1932. p. 415-423. Progress report suggesting lines of attack on the interrelated problems of consumption, production, and distribution by Committee of American Engineering Council.
- Bugaboo of overproduction. Wisconsin Agriculturist. v. 59, no. 10. May 14, 1932. p.5-6. Unless theory can explain facts of experience, it has no validity.
- Care of milk utensils on the farm. By R. J. Posson and Ralph P. Hotis. Jersey Bulletin. v.51, no.20. May 18, 1932. p. 694,714.
- Dragline excavator development for levee building. By J. C. French. Engineering News-Record. v. 108, no. 22. June 2, 1932. p. 796-798. Increased boom reach, larger buckets, quicker swing and greater freedom of travel have enlarged working range. New power units have simplified servicing.
- Engineering education in Canada. By A. W. McQueen. Engineering Journal. v. 15, no. 5. May, 1932. p. 253-260. Engineering is not end in itself; it is but means of accomplishing certain desired results for progress and welfare of society.
- Factors affecting the price of rice. By Carlos E. Campbell. 1932. 56p. U. S. Department of Agriculture. Technical Bulletin no. 297.
- Fifty-year index to personnel and publications of the Ohio Agricultural Experiment Station. 1932. 188p. Bulletin 501. Contains a subject index to station publications, 1882 - 1931.
- Fostering standardization. By R. A. Martino. Commercial Standards Monthly. v. 8, no. 11. May, 1932. p. 332 - 334. Cooperation of Bureau of Standards and American Standards Association.
- Fundamental properties of mortar for durable unit masonry. By Leo S. Trainor. Clay-Worker. v. 97, no. 5. May, 1932. p. 250-253. Plasticity; adhesion; volume changes after hardening; elasticity; resistance to frost; freedom from efflorescence; rate of hardening; absorption; strength.
- Graphic methods aids plotting of hydrographic locations. By Henry S. Pond. Engineering News-Record. v. 108, no. 20. May 19, 1932. p. 718-719. Development of plotting charts permits rapid and accurate locating on field sheets in 10 sec. after reading two sextant angles.

Miscellaneous. (Cont'd)

Huge growth from small beginning: United States Department of Agriculture has developed into mammoth institution. New Agricultural Review. v. 1, no. 4. December, 1931. p. 16-17.

Manual of milk testers in New Jersey. By H. H. Tucker. New Jersey Agricultural Experiment Station. Bulletin no. 539. 1932. 31p.

Measurement of spectral energy distribution for agricultural research. By Harry Miller. Agricultural Engineering. v. 13, no. 5. May, 1932. p. 125-126.

Modern research organizations and the American patent system By Frank B. Jewett. Mechanical Engineering. v. 54, no. 6. June, 1932. p. 394-398, 450.

Operation and care of Multiple V - belts. Power. v. 75, no. 21. May 24, 1932. p. 766-769. Causes are given for troubles sometimes experienced in operation of Multiple V - belts due to improper design, abnormal operating conditions and lack of attention to simple requirements.

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